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An Exchange Professorship with Iowa State University — A Teaching Experiment

By Owen E. Williams, *Assistant Professor of Engineering Drawing*

EARLY in November Professor F. G. Higbee, head of Department of Descriptive Geometry and Drawing at the State University of Iowa, Iowa City, arranged with Professor Thos. E. French, head of Department of Engineering Drawing at Ohio State, for an exchange professosrhip between the two departments.

It was planned that each should delegate a member to visit the other for a limited period. The visiting instructor would assume certain teaching duties, would be given opportunity to observe and study methods, practices and results, and would be expected to offer constructive criticism of the department visited. Obviously this plan would permit ready and full comparison between the work of the two departments and point the way toward improvement of both. Professor Higbee's high standing as a teacher of engineering drawing, and as an authority on Descriptive Geometry and its pedagogy, and the known excellence of instruction in the subjects at Iowa emphasized the contemplated exchange as an opportunity to gain broadened vision, increased teaching equipment and stimulated professional interest.

So on December second, the writer, representing the Department of Engineering Drawing at Ohio State, journeyed to Iowa City and assumed the teaching duties of Professor Higbee, who had likewise come to Columbus. Each remained at the post of the other, fulfilling the exchange program, until the holiday recess. The length of visitation was nearly three weeks.

Critical comparison of the work of the two departments is, of course, out of place here. However, it may be said that the instruction and results observed in the several drawing courses at Iowa measured up to the previously acknowledged high standard. One point may be noted: The work in drawing is alike in all engineering courses except chemical. This is in contrast with the differentiation that prevails at Ohio State, in an effort to meet the requirements peculiar to the different divisions of engineering training.

Iowa's drawing department is one of the several comprising the College of Applied Science. This is as it should be. Too often drawing is administered otherwise: incorporated as a course in another department and taught by instructors who lack training in it, or have no conception of its value as a medium for developing "exact, logical thinking." One of the largest schools in the West is now re-establishing and rejuvenating its engineering drawing, after a disastrous experience brought on by absorption of the courses into other departments of instruction.

Dean Wm. G. Raymond of Iowa recognizes the value of giving individuality to the drawing department, of animating it, and takes advantage of the inherent potentiality of the subject in the scheme of engineering education.

Engineering courses in The College of Applied Science are: Mechanical, Electrical, Civil, Sanitary, Chemical and General. There is also a combined Liberal Arts-Engineering course and a course in Chemistry. Sanitary Engineering is classified as separate but is based largely on civil engineering. General engineering, devised for executive training into commerce or business, requires four or five years as desired, with a degree at the end of each period. Chemical engineering requires five years, the last in Graduate College, with two degrees—one each after four and five years respectively. Arts-engineering may be taken four, five or six years. The first three are in liberal arts. Degrees are granted after each term of years, the last degree being full professional.

The curriculum for all engineering courses is uniform through the first three years.

Students in engineering number over 400. The mere fact of this is more significant when the existence of a school of engineering in Iowa State College at Ames is known, and that the establishment of engineering in Iowa City rates back only to 1905.

Student activities of a professional nature find expression in the meetings of the student branches of the national engineering societies. The entire student body is organized as the Associated Students of Applied Science. The Transit, an engineering monthly, is published by this group.

There are chapters of Tau Beta Pi and Sigma Xi, the honorary engineering and scientific societies.

Ohio State's rip-roaring Round-up is paralleled by Iowa's spring outdoor carnival called Mecca. The name is derived from the first letters of the names of the several courses: Mechanical, Electrical, Civil, Chemical, Arts-engineering.

The buidling program of the University includes an engineering group. With the present unit of Engineering Hall as a key building, others now in the group are: Steam Engineering Laboratory, Central Heating and Power Plant, Engineering Shops, Hydro-Electric Power Plant at the Iowa River nearby and Hydraulic Testing Plant, likewise situated.

Engineering Hall, used wholly for engineering purposes, is, thereby, a factor contributing to the morale of the college. It is of Bedford limestone, modern, three to five stories high; contains lecture, recitation, drawing and study rooms, the dean's and departmental offices and the engineering library. With the affairs of the college centralized in a single building, an atmosphere has been created that instills, develops and sustains an interest on the part of the student in preparing for his prospective chosen work.

In this general connection an unusual practice obtains. Among the equipment of Engineering Hall is an individual desk, drawing table and lamp for each student. The building is open at all times for study or drafting purposes. Smoking is permitted after 4:30 p. m. This plan seemed

to be justified by the extent to which the building is used after class hours. While composing a letter one night, with obligato from a jazzing cornet out in one of the laboratories, the writer was led to believe though, that conditions conducive to concentration of thought are not always assured.

All concerned in engineering at Iowa, students, faculty and others, are more than ordinarily united in a common interest and purpose. The existence of this harmonious relation is attributed principally to the Dean. By instituting weekly faculty luncheons, at which the business of the college is transacted and its problems considered, he has brought about frequent contact among the staff as a whole. As a result, the faculty is less prone to lose sight of its primary function: teaching—and if an instructor gives proper attention to that, the students interests will be comprehended.

One of the planks in Dean Raymond's platform is this: That the University is operated for the benefit of the students—a sound plank, but too frequently not found in the platforms of university professors. Too often, as one grows older in teaching, there is a tendency to become calloused as to instructional obligations; to be disregardful or oblivious of student viewpoint; to regard the student as inanimate material for piece work production in the academic mill. Contrarily, the Dean's long term of service has led to fuller appreciation of the unwritten contractual relation between faculty and students. He is mindful of the motivating hopes and ambitions that put students in college and the besetting difficulties that frequently put them out. Besides, he does not overlook the human attribute of individuality.

Scholastic mortality is unusually low at Iowa. One reason or another may be advanced to explain why. The principal instrumentality though, has been the co-operative effort between faculty and students, engendered by sympathetic recognition by the former of the human relations involved.

The exchange professorship was planned and accomplished as a business and professional mission. It fulfilled the intent of broader acquaintance and enlarged vision in one's own field of endeavor. It furnished opportunity not only for criticism but for substantiation of departmental methods and practices. It was a bit of experience both refreshing and inspirational. While professionally the experiment was a complete success, personally the writer will remember Iowa best for friendliness. It seemed all pervading, and in future, when pedagogical impressions from this sojourn have perhaps dimmed, Friendliness will stand forth, not merely as a recollection, but as a symbol of Iowa.